The Examiner also objected that the Amendment filed May 5, 2000 introduced new matter regarding the plasmid pETB2360210. We have corrected this above.

The Examiner also objected that the specification does not support the construct recited in claim 39. We have corrected this above.

All the pending claims are rejected under 35 U.S.C. §112, first paragraph as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventors had possession of the invention at the time the application was filed. Specifically, the Examiner has objected that the language in claim 1 referring to multiple subsets of T cells is not supported by the specification, that is, Examples 4, 8 and 9.

To this, we point out that the disclosure does indeed support this feature. For instance, at page 20, line 31- page 21 line 15 it is taught that certain amino acid residues are likely to form part of integral molecular surfaces in contact with T-cell antigen receptors: "...side chains of amino acids within 5 residues of the position represented by N23" ... "N60..., Y91... and D210..." These are specific sites and these residue positions used SEB as the prototype example. This was based upon an examination of the 3-dimensional structure of SEB in complex with HLA-DR, by building a molecule model of SEA also in co-complex with HLA-DR and confirmed by experimental results. It was found that residues at specific positions were conserved among bacterial superantigens. In addition, these positions did not form part of the contacts with HLA-DR but were poised to potential contact another receptor, and site-specific mutations of these positions resulted in mutant SEB that presented a reduced ability to stimulate human T cells but still retained HLA-DR binding.

For example, SEB Y61A supported reduced T-cell responses but retained normal HLA-DR1 affinity (Example 4, page 49 line 8 and Fig. 2a-c). Because the mononuclear cells used in the experiments were isolated from normal human donors, they contained polyclonal T cells that expressed all of the expected products of the possible >50 alleles of the variable domain of the T-cell receptor b subunit. The loss of the response of one T cell clone or one subset of T cells that expressed a specific variable domain would not have caused a significant decrease in T cell responses because many other responding T

cells were still present. Therefore the detection of a significant decrease in T cell responses from polyclonal T cells (e.g. SEB Y61A) confirmed the observations made from molecular modeling. The examples provided that referred to SEA were germane to SEB in that the modeling results demonstrated a common 3-dimensional fold for both proteins (Examples 1-4, pages 42-49).

Thus, the language "multiple subsets of T cell antigen receptor is altered" is fully supported by the disclosure as originally filed, and withdrawal of this rejection is believed to be in order.

The Examiner has also stated that claim 38 recites a DNA construct for which a deposit is required. To that end, the undersigned confirms that construct pETB899445P was deposited with the American Type Culture Collection on June 4, 1997. The deposit was made under the Budapest Treaty and assurance is hereby given that all restrictions on the accessibility will be irrevocably removed by the applicant upon the granting of the patent. Thus said, we believe that claim 38 is properly enabled.

Claims 12-14, 29-31, 47-49, 55-58 and 65-67 are rejected under 35 U.S.C. §112, second paragraph as indefinite. We have amended claims 12-14 and 29-31 to address the Examiner's concerns, and believe that all the claims are free of indefiniteness. Reconsideration is requested.

Having addressed all of the Examiner's concerns above, this application is believed to be in condition for allowance and notice of such is earnestly solicited.

If the Examiner has any questions or would like to make suggestions as to claim language, she is encouraged to contact Marlana K. Titus at (301) 924-9600.

Respectfully submitted,
By

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